

Claims:

The following claims are currently pending::

1-19. (Cancelled).

20. (Previously presented) A process for the oxidation of ammonia which comprises reacting ammonia and air in the presence of an oxidation catalyst comprising oxides of (a) at least one variable valency element Vv selected from the group consisting of cerium and praseodymium and at least one non-variable valency element Vn selected from the group consisting of yttrium and a non-variable valency rare earth element, and (b) cobalt, said cobalt and elements Vv and Vn being in such proportions that the (element Vv plus element Vn) to cobalt atomic ratio is in the range 0.8 to 1.2, and at least some of said cobalt and element Vv and element Vn oxides are present as a mixed oxide phase with less than 30% of the cobalt (by atoms) being present as free cobalt oxides.

21. (Previously presented) A process according to claim 20 wherein less than 25% of the cobalt (by atoms) is present as free cobalt oxides.

22. (Previously presented) A process according to claim 20 wherein less than 15% (by atoms) of the cobalt is present as cobalt monoxide.

23. (Previously presented) A process according to claim 20 wherein less than 5% by weight of the composition is free cobalto-cobaltic oxide and less than 2% by weight is free cobalt monoxide.

24. (Previously presented) A process according to claim 20 wherein element Vn is selected from the group consisting of yttrium, lanthanum and neodymium.

25. (Previously presented) A process according to claim 20 wherein the atomic proportions of variable valency element Vv to non-variable valency element Vn is in the range 0 to 0.3.

26. (Previously presented) A process according to claim 20 wherein the oxidation catalyst is obtained by heating a composition containing oxides of cobalt and the elements Vv and Vn, to a temperature in the range 900-1200°C.

27. (Previously presented) A process according to claim 20 wherein the oxidation catalyst comprises a primary support in the form of a mesh, gauze, pad, or monolith formed from a high temperature iron/aluminum alloy or a mesh, gauze, pad, monolith, or foam of a ceramic material, a secondary support in the form of an alkali-free alumina or lanthana wash coat on said primary support; and, supported on said secondary support, an active coating of said oxidation catalyst.